

505. Next, the communication server identifies one or more of the luminescent patterns that comprise the crowd image for transmission to the particular wireless mobile client,

**block 506.** Such a determination may be based upon one or more criteria such as the location of wireless mobile client including venue and seating location, the overall crowd

5 pattern to be conveyed, as well as the capabilities of the particular wireless mobile client. More specifically, the communication server may store data representing a hardware configuration (e.g. amount of memory, number of LEDs, single or multicolor LEDs, etc) for each wireless mobile client, and may determine which luminescent patterns are to be transmitted and subsequently displayed by the wireless mobile client based at least in part upon the stored hardware configuration. For example, if the communication server identifies a particular wireless mobile client as having a certain memory capacity that is greater than an established threshold, the communication server may opt to transmit a sequence of luminescent patterns to the wireless mobile client rather than transmitting one luminescent pattern at a time. Such configuration information may be provided to the communication server in a number of ways including by way of voice or DTMF input from a user.

Once the appropriate luminescent patterns have been identified, the communication server then transmits the luminescent patterns to the wireless mobile client, **block 508.** In the illustrated embodiment, the communication server further 20 includes synchronization information with the luminescent patterns, **block 510.** The synchronization information serves to synchronize the cooperative display of one or more luminescent patterns amongst multiple wireless mobile clients. Once a wireless mobile client receives the one or more luminescent patterns, the client displays the

luminescent pattern(s) to visually convey the larger crowd pattern based upon any synchronization constraints that may have been imposed by the communication server, **block 512**. In accordance with the illustrated embodiment, if there are additional patterns to be transmitted to the wireless mobile client (**block 514**), the wireless mobile client continues to receive one or more additional luminescent patterns (**block 506**) while the wireless mobile client displays the one or more original luminescent patterns (**block 512**) (described further with respect to **Figure 6** below). If there are not any additional patterns to be transmitted to the wireless mobile client, the next crowd image to be displayed is then determined, (**block 505**).

Variations to the above-described operational flow are also contemplated. For example, if at **block 506**, the communication server identifies e.g. 100 patterns to be transmitted to a wireless mobile client, at **block 508** the communication server may transmit all 100 patterns. Accordingly, at **block 510**, the communication server may then identify (and transmit) synchronization information that instructs the client to display each of the patterns at a given interval such as e.g. 0.1 sec. Finally at **block 514**, the communication server would determine the next crowd image to be displayed.

Additionally, in the event that the crowd image approximates a live video feed, or is representative of a tape delayed video stream for example, the various luminescent patterns are determined at **block 506** such that each luminescent pattern represents one still-image frame of the source video. At **block 508**, the communication server transmits all patterns to the client where they are then displayed (**block 512**) in accordance with any synchronization information that may also be stipulated by the communication server. In one embodiment of the invention, the processes associated

with blocks **506-514** are repeated in parallel for multiple sets of clients, where those clients receiving the same patterns and synchronization data represent a set of clients.

**Figure 6** illustrates an exemplary operational flow performed by visualization

- 5 controller **212** and visualization agent **204** of wireless mobile phone **200** to display one or more luminescent patterns, in accordance with one embodiment. As illustrated, upon receipt of a request to selectively activate or deactivate selected ones of LEDs **214** in selected manners, block **602**, visualization controller **212** determines if the request is of the first type (i.e. a single round request type), or of the second type (i.e. the multiple rounds/cycles request type), block **604**. The distinction of the two types may be explicitly specified or implicitly inferred based at least in part on the format and/or substance of the calling parameters included with the function call. If the request is determined to be of the first type (i.e. a single round request type), visualization controller **212** activates and/or deactivates selected ones of LEDs **214** as requested, block **605**. If the request is determined to be of the second type (i.e. a multiple round/cycle request type), after retrieving the “specification” for the activations/deactivations to be performed, block **606**, visualization controller **212** activates and/or deactivates selected ones of LEDs **214** as requested, block **608**. For a multiple round request, the activation/deactivation operation of LEDs **214** of block **608** is iteratively performed for a sufficient number of times to achieve the selective activation/deactivation requested.
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Although the present invention has been described herein as utilizing a communication server to transmit representations of the luminescent data to the